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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/361,734 | 07/28/1999 | JOJI KASAI | FUR0007-US | 5891 |

28970 7590 06/07/2005

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EXAMINER

MICHALSKI, JUSTIN I

ART UNIT PAPER NUMBER

2644

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 09/361,734 | Applicant(s) KASAI ET AL. | |
| | Examiner Justin Michalski | Art Unit 2644 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/17/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Sadaie (US Patent 5,033,092).

Regarding Claim 1, Sadaie discloses an audio signal processing circuit for an audio reproduction apparatus at least having sound source located substantially at left and right sides to a listener, comprising: a phase difference control portion (2R and 2L) which receives a left channel signal (L) for the left sound source and a right channel signal (R) for the right sound source, controls a phase difference between the left and right channel signals so as to produce a relative phase difference in the range of 140 degrees to 160 degrees (Col. 6, lines 4-5), and outputs the phase difference controlled left and right channel signals for the left and right sound source (Speakers 4R and 4L), respectively.

Regarding Claim 2, Sadaie further discloses the phase difference control portion produces the relative phase difference of 140 degrees to 160 degrees in a frequency region ranging from 200 Hz to 1 kHz (Col. 5, lines 66-67).

Regarding Claim 3, a surround audio reproduction apparatus having a left and a right channels in front of a listener and a left and a right surround channels at left and

right sides with respect to the listener, comprising; a phase difference control portion (2R and 2L) which receives a left surround channel signal (L) and a right surround channel signal (R), controls a phase difference between the left and the right surround channel signals so as to produce relative phase difference in the range of 140 degrees to 160 degrees (Col. 6, lines 4-5), and outputs the phase difference controlled surround left and right channel signals for a left and a right surround sound source (speakers 4R and 4L), respectively.

Regarding Claim 4, Sadaie further discloses the left and the right surround sound sources are a virtual sound source produced by a sound image localization processing (Col 1, lines 8-12).

Regarding Claim 5, Sadaie further discloses the phase difference control portion produces the relative phase difference of 140 degrees to 160 degrees in a frequency region ranging from 200 Hz to 1 kHz (Col. 5, lines 66-67).

Regarding Claim 6, Sadaie discloses An audio reproduction method at least utilizing sound source located substantially at left and right sides to listener, comprising the steps of: controlling a phase difference between a left channel signal (L) for the left sound source (4L) and a right channel signal (R) for the right sound source (4R) so as to produce a relative phase difference in the range of 140 degrees to 160 degrees (Col. 6, lines 4-5); and outputting the phase difference controlled left and right channel signals for the left and right sound source, respectively.

Response to Arguments

Art Unit: 2644

2. Applicant's arguments, see pages 1 and 2, filed 1 February 2005, with respect to the rejection(s) of claim(s) 1-6 under 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sadaie.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Mouri (5,799,094) discloses a surround signal processing apparatus for sound localization.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (571)272-7524. The examiner can normally be reached on M-F 7-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JIM



SINH TRAN
SUPERVISORY PATENT EXAMINER